

**SINGLE-PHASE GLASS PASSIVATED  
SILICON BRIDGE RECTIFIER**  
VOLTAGE RANGE 50 to 1000 Volts CURRENT 4.0 Amperes

**FEATURES**

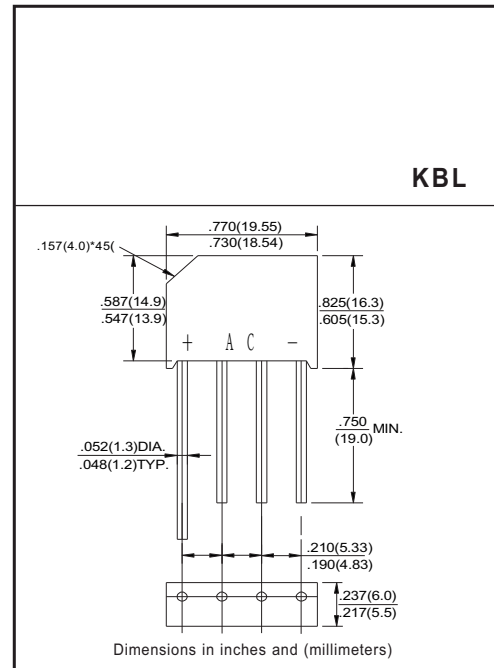
- \* Silver-plated copper leads
- \* Surge overload rating: 125 amperes peak
- \* Low leakage
- \* Mounting position: Any
- \* Low forward voltage

**MECHANICAL DATA**

- \* Epoxy: Device has UL flammability classification 94V-0

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
resistive or inductive load.



**MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

| RATINGS   | SYMBOL                            | KBL401 | KBL402 | KBL403 | KBL404 | KBL406       | KBL408 | KBL410 | UNITS |                  |
|---|-----------------------------------|--------|--------|--------|--------|--------------|--------|--------|-------|------------------|
| Maximum Recurrent Peak Reverse Voltage  | V <sub>RRM</sub>                  | 50     | 100    | 200    | 400    | 600          | 800    | 1000   | Volts |                  |
| Maximum RMS Voltage   | V <sub>RMS</sub>                  | 35     | 70     | 140    | 280    | 420          | 560    | 700    | Volts |                  |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>                   | 50     | 100    | 200    | 400    | 600          | 800    | 1000   | Volts |                  |
| Maximum Average Forward Rectified Current at T <sub>A</sub> = 50 °C                               | I <sub>O</sub>                    | 4.0    |        |        |        |              |        |        | Amps  |                  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>                  |        |        |        |        | 125          |        |        |       | Amps             |
| Current Squared Time  | I <sup>2</sup> T                  |        |        |        |        | 65           |        |        |       | A <sup>2</sup> S |
| Typical Thermal Resistance (Note 1)   | R <sub>θJC</sub>                  |        |        |        |        | 22           |        |        |       | °C/W             |
|   | R <sub>θJA</sub>                  |        |        |        |        | 28           |        |        |       |                  |
| Operating and Storage Temperature Range   | T <sub>J</sub> , T <sub>STG</sub> |        |        |        |        | -55 to + 150 |        |        | °C    |                  |

**ELECTRICAL CHARACTERISTICS (@ TA=25 °C unless otherwise noted)**

| CHARACTERISTICS   | SYMBOL                    | KBL401 | KBL402 | KBL403 | KBL404 | KBL406 | KBL408 | KBL410 | UNITS |       |
|---|---------------------------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| Maximum Instantaneous Forward Voltage at 4.0A DC        | V <sub>F</sub>            |        |        |        |        | 1.1    |        |        |       | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @ T <sub>A</sub> = 25 °C  |        |        |        |        | 10     |        |        |       | uAmps |
|   | @ T <sub>A</sub> = 150 °C |        |        |        |        | 1000   |        |        |       |       |

NOTES : 1. Thermal Resistance : Heat-sink case mounted or if PCB mounted.  
2. "ROHS compliant"  
3. Measured at 1MHz and applied reverse voltage of 4.0 volts.

2020-04/10  
REV:A

# RATING AND CHARACTERISTICS CURVES (KBL401 THRU KBL410)

FIG.1-MAXIMUM FORWARD SURGE CURRENT

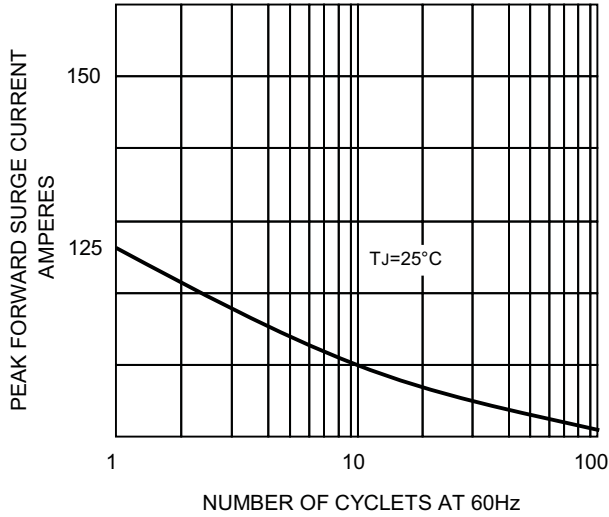


FIG.1-DERATING CURVE  
OUTPUT RECTIFIED CURRENT

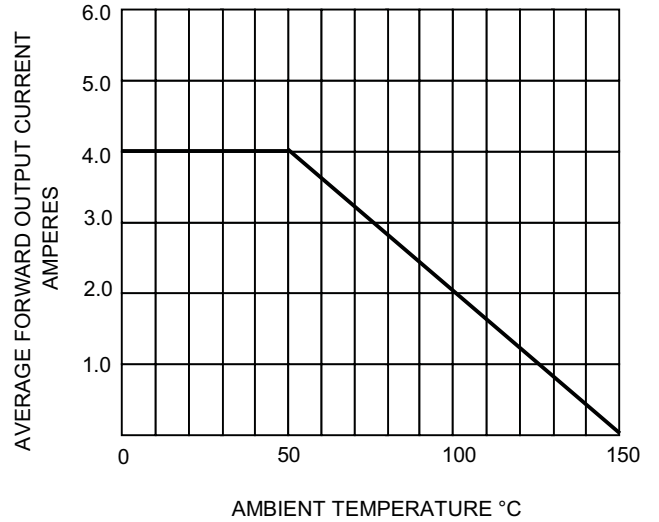


FIG.4-TYPICAL FORWARD CHARACTERISTICS

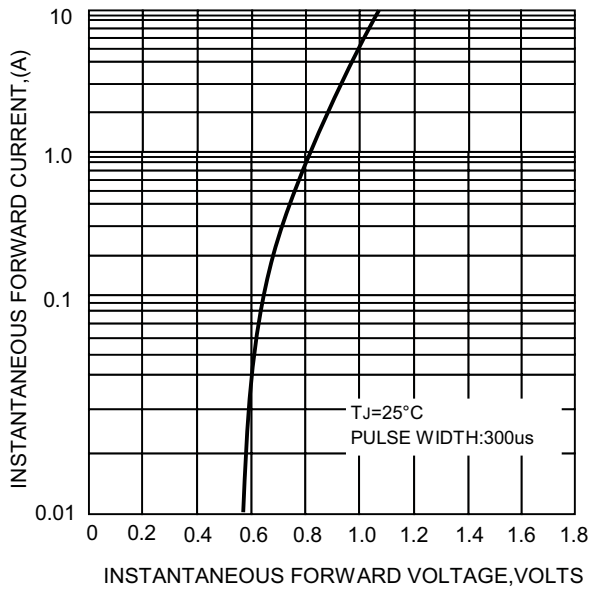
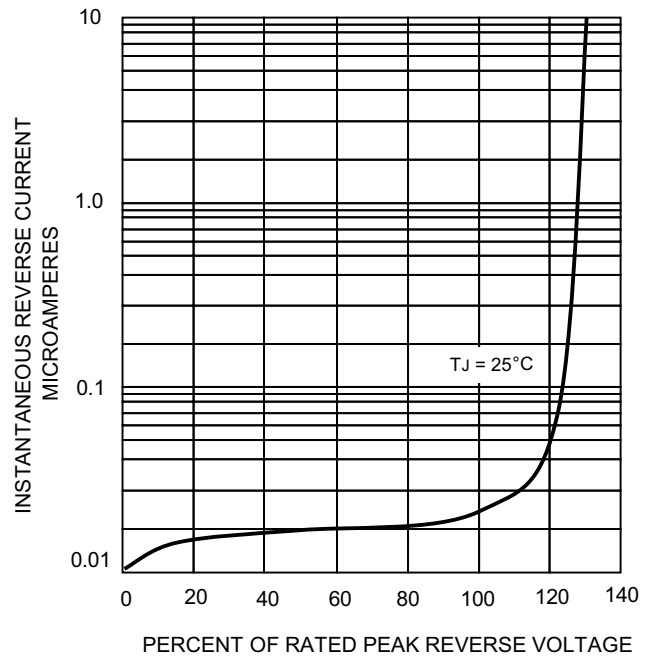
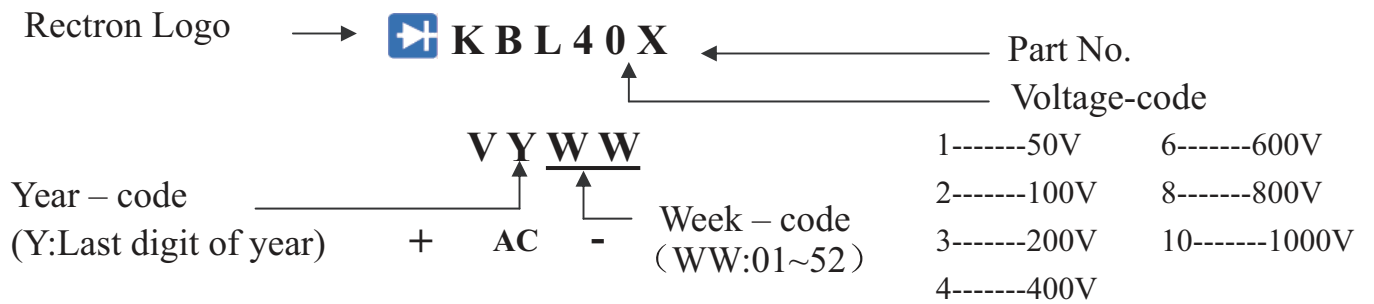


FIG.4- TYPICAL REVERSE CHARACTERISTICS



## Marking Description



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### TUBE PACK

| PACKAGE | PACKING CODE | EA PER BOX | INNER BOX SIZE<br>(mm) | CARTON SIZE<br>(mm) | EA PER CARTON |
|---------|--------------|------------|------------------------|---------------------|---------------|
| KBL     | -C           | 1,150      | 49*14.5*13.2           | 49.5*32.5*15.5      | 2,300         |

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